

apparent Hemingfordian forms. *Paroligobunis* is both an Arikareean (*P. simplicidens*) and Hemingfordian (*P. petersoni*) genus. *Paroligobunis frazieri*, however, is more like *P. simplicidens* in its features. *Mammacyon* is primarily an Arikareean genus; *Mammacyon obtusidens* occurs in the middle Arikareean (Monroe Creek Formation). *Protosciurus* has never been found later than the Middle Arikareean (Black, 1963). As a choice must be made on the reliability of the indicators, I think it more probable that the widespread and better known forms, *Mammacyon* and *Protosciurus*, are better age indicators and that the presence of *Phlaocyon* and *Nothokemas* in the SB-1A Local Fauna represent Arikareean occurrences of these genera.

SUMMARY

A small Arikareean fauna, the third known from Florida, is described. The fauna consists of *Mammacyon* cf. *obtusidens*, *Phlaocyon* sp., ?*Mesocyon*, *Paroligobunis frazieri* n. sp., an indeterminate carnivore, an indeterminate anchitherine horse, *Nothokemas waldropi* n. sp., and *Protosciurus* sp. All the included taxa, with the exception of the higher taxa which represent indeterminate species, are new additions to the faunal record of Florida. *Mammacyon*, *Protosciurus*, and *Paroligobunis* are present in Arikareean faunas of the classic Great Plains sequence and allies the SB-1A Local Fauna with this North American Land Mammal Age. *Mammacyon* and *Protosciurus* may be conspecific with known forms but the small amount of material referable to these genera prevents a full taxonomic treatment at the species level. The presence of *Phlaocyon* in the SB-1A fauna is evidently an early occurrence of this more typically Hemingfordian genus, and in some respects this specimen is more primitive than the later species. The new species of *Nothokemas* from SB-1A extends the temporal range of this characteristic Gulf Coast Hemingfordian camel back into the Arikareean. The SB-1A fauna as a whole is similar to the better-known Arikareean faunas of western North America with the added dimension of regional differentiation as exhibited in new species of *Paroligobunis* and the endemic Gulf Coast genus *Nothokemas*. Further distinctions among the rarer taxa, which are now conservatively attributed to individual or populational variation, may become apparent as the fossil record of Florida becomes better known.

The fauna is from unsorted terrestrial outwash sediments overlying the Suwannee Limestone (Middle Oligocene) which may have been associated with faulting caused by the uplift of the Ocala Arch in northcentral Florida.

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A NEW SPECIES OF *LIOLAEMUS* (SAURIA:
IGUANIDAE) FROM THE ANDEAN MOUNTAINS
OF THE SOUTHERN MENDOZA VOLCANIC
REGION OF ARGENTINA

By

JOSÉ M. CERI¹

In the course of field research in South America, William E. Duellman and his associates obtained specimens of an undescribed iguanid lizard in the Paso El Choique area in southern Provincia de Mendoza, Argentina. A careful comparison of these lizards with other Argentine iguanids revealed that the new species is a member of the widespread, Andean-Patagonian genus *Liolaemus*; however, it is easily distinguished by a significant combination of several morphological characters from its congeners. In recognition of the discoverer of this new iguanid, it herewith is named after Dr. William E. Duellman, who has advanced so appreciably field and taxonomic studies on the herpetofauna of South America.

Liolaemus duellmani, new species

Figure 1

Holotype.—The University of Kansas Museum of Natural History (KU) 161126, an adult male from Paso El Choique, 50 km SSW El Manzano, 2260 m, Provincia de Mendoza, Argentina (latitude 36°27' S; longitude 60°50' W), collected on 12 December 1974 by William E. Duellman and John E. Simmons.

Paratopotypes.—KU 161127–161128, adult and subadult male specimens collected with the holotype; Instituto Biología Animal,

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Universidad Nacional de Cuyo (IBA-UNC) 139, an adult female, collected on 22 November 1961 by José M. Cei and Virgilio G. Roig.

Diagnosis.—*Liolaemus duellmani* can be distinguished from other *Liolaemus* by the following combination of characters: 1) slender body; 2) short legs; 3) subimbricate, almost juxtaposed polygonal dorsal scales; 4) small, juxtaposed, conical lateral scales; 5) wide, smooth ventral scales; 6) dorsally keeled caudal scales; 7) presence of antehumeral and neck folds; and 8) strongly clawed digits.

Description.—Head length about one-fifth body length (Fig. 1 and Table 1). Well-developed antehumeral fold present; neck folds distinct. Snout bluntly pointed. Rostral scale large and wide, twice as wide as high; nasal not in contact with rostral, separated from it by two enlarged scales. Nostril equal in size to nasal scale, located posterolaterally at a point midway between eye and tip of snout. Ear opening elliptical, edged by small, regular-shaped scales becoming larger posteriorly.

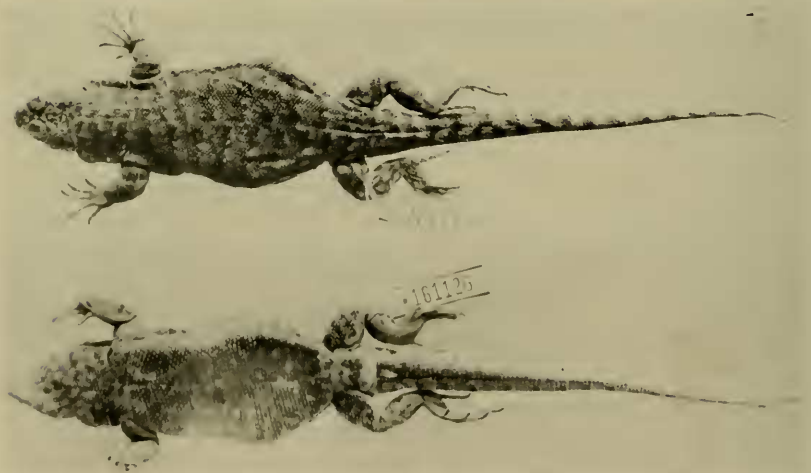


FIG. 1.—Dorsal (upper) and ventral (lower) views of holotype of *Liolaemus duellmani*, an adult male (KU 161126); total length, 170 mm.

Temporal scales smooth, irregularly shaped and convex. Scales of frontal, parietal, and occipital regions large and slightly convex. Interparietal scale small, nearly triangular, and bordered laterally by a pair of large, irregularly shaped parietal scales meeting posterior to interparietal. Largest supraoculars smaller than scales of interorbital region. Subocular scale enlarged, undivided, separated from supralabials by single row of slightly rugose, pointed scales. Supralabials 10; infralabials 7. Mental trapezoidal. Eyelids slightly fringed. Pterygoid teeth present. Scales of lateral neck granulated,

rounded, and smaller than subimbricate dorsal neck scales. Scales across gular region between tympana 48–50. Vertebral scale row absent. Dorsal scales heterogeneous, small, polygonal but almost rounded, faintly keeled or smooth, faintly subimbricate, and almost juxtaposed. Granular scales present between large scales. Scales on sides smaller, rather conical, and juxtaposed. Ventral scales larger than dorsal scales, wide and smooth, and decreasing in size in gular region. Upper caudal scales large, square, and distinctly keeled. Ventral caudal scales subtriangular and smooth. Scales around middle of body 86–90.

Scales of dorsal surface of forelimb large, imbricate, and slightly keeled; ventral forelimb scales granular and smooth. Dorsal thigh scales large, imbricate, and smooth; ventral thigh scales small and nearly granular. Dorsal tibia scales heterogeneous, subimbricate, and juxtaposed; ventral tibia scales large, imbricate, and smooth. Four indistinct secretory pores present anterior to vent.

Subdigital lamellae of fourth finger 18, faintly keeled. Subdigital lamellae of fourth toe 20–21, tricarinate. Claws of all digits sharp, black, and 3–4 mm long.

Hind limb rather short and stout; when adpressed, fourth toe not reaching axilla. When forelimb adpressed, fourth finger reaching middle of body.

Coloration: Dorsum pale gray becoming reddish tan laterally, with dark brown transverse markings enclosing bluish white flecks. Dorsum of tail pinkish tan with dark brown bars. Throat pale gray mottled with black. In smaller individual, belly colored like throat; in others, belly black. Ventral surfaces of forearm and hand, femoral region, and foot bright yellow. Iris reddish brown. Tongue pink. Lining of throat gray. Coloration of preserved female like males except darker.

Distribution.—This species is known only from the type locality.

Remarks.—*Liolaemus duellmani* is found in a xeric, montane

TABLE 1.—Measurements (mm) of *Liolaemus duellmani*.

CHARACTER	Holotype		Paratopotypes	
	KU 161126, ♂	KU 161127, ♂	KU 161128, ♂	IBA-UNC 139, ♀
Total Length	170.0	— ^a	— ^a	— ^b
Snout-vent Length	80.0	83.0	60.0	82.0
Head Length	18.5	20.0	20.0	19.2
Head Width	14.6	15.5	12.0	14.6
Forelimb Length	24.5	25.0	21.0	28.0
Hind limb Length	40.5	42.0 ^c	32.5 ^c	42.0 ^c
Axilla-groin Length	42.0	42.0	31.0	42.0

^a Tail short, regenerated.

^b Tail broken.

^c When adpressed, hind limb reaches axilla.

habitat characterized by basaltic outcrops, rocky slopes and sandy soil. Vegetation consists of clumps of plants—bunch grass, cacti, *Ephedra*, and spiny legumes.

The female contained two mature eggs, each 21 mm in diameter. The size and number of eggs suggest that this species may be oviparous.

DISCUSSION

Liolaemus duellmani cannot be regarded as a member of any presently recognized group of Andean-Patagonian *Liolaemus*. It differs from the psammophilous and burrowing forms of the *fitzingeri* complex by the lack of femoral patches, reduced number of preanal pores, and the number and shape of dorsal scales. Furthermore, the dorsal scales are distinctly imbricate and keeled in the *fitzingeri* species-group. Likewise, *L. duellmani* is distinct from the other species of Patagonian lizards belong to the *kingi-archeforus*, *megallanicus*, and *bibroni-gracilis* species groups. These groups are characterized by imbricate, keeled, and mucronate dorsal scales, and obviously different color patterns (Cei 1973, 1975a, 1975b). *Liolaemus duellmani* cannot be allocated to any presently recognized species-group of Chilean *Liolaemus* (Donoso Barros 1966; Peters and Donoso Barros 1970), nor referred to *L. fitzgeraldi* (Boulenger 1899), *L. robertmertensi* (Hellmich 1964), or *L. dorbigny* (Koslowsky 1898). It differs from the latter three species in characteristics of its dorsal and ventral scales, and coloration. The species also can be distinguished from *L. elongatus*, *L. austromendocinus*, and *L. buergeri*, all of which live in the same region, on the bases of their imbricate, mucronate and keeled dorsal scales, larger tails, and distinctively different dorsal colorations (Cei 1974).

Although *Liolaemus kriegi* and *L. ceii* (Müller and Hellmich 1939; Donoso Barros 1971) are similar to *L. duellmani* in having heterogeneous lepidosis and granular scales between the larger scales of the dorsum, both species have many more scales at midbody (97–115), a dark pileus, extremely fat base of the tail, slightly keeled dorsal scales, nasal scale in contact with rostral, and the fourth toe with more subdigital lamellae (28–30).

Liolaemus ruibali, which inhabits the Uspallata mountains in the north of Mendoza Province (Donoso Barros 1961), seems the most closely related to *L. duellmani*. Its scales are heterogeneous, subimbricate, and almost smooth. The nasal is not in contact with the rostral, and it shares the same number of supralabials, infra-labials and subdigital lamellae with *L. duellmani*. *Liolaemus ruibali* differs from *L. duellmani* by its smaller size, shorter tail, and fewer scales at midbody (63–80). The lateral scales are less heterogeneous, and the color pattern is distinct.